AMATEUR RADIO

Published in the interests of "Amateur Radio" by the Wireless Institute of Australia (Vic. Div.) official organ of the Royal Australian Air Force Wireless Reserve.

PRICE 6D

OCTOBER, 1933

New SUPER-PHONIC Radiotrons

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TYPES 58—78
Triple Grid Super Control Amplifier.

TYPES 2A7—6A7
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"AMATEUR RADIO"

Published by the Wireless Institute of Aust. Victorian Division.

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All communications concerning this Magazine and all Mss. to be forwarded to the Editor, "Amateur Radio," c/o Box 4540, G.P.O. Melbourne

Subscription to "Amateur Radio" is 6/- per annum post free (paid in advance) but is offered at reduced rates to members of the Wireless Institute of Australia.

EDITORIAL.

W.I.A. (Vic.). President (Geo. Thompson Esq.) Introduces "Amateur Radio."

With this, the first issue of "Amateur Radio," a long-felt want is being satisfied. It is a far cry from our old Magazine which appeared in 1921 to the present time, and during the intervening years, many and varied attempts have been made to offer the army of radio enthusiasts in Australia something worth while, which would be of real interest, value and help. It is the intention of the magazine committee, the council, and all concerned, to see that every section of our vast radio community is catered for in these pages. With that object in view, pithy news of general interest will regularly find space in its pages. To all members of the W.I.A., especially those of the Victorian Division, the R.A.A.F.W. Reserve, and all radio enthusiasts ,we confidently look for wholehearted support in this undertaking

This magazine is the official organ of the Victorian Division, every financial member of which will receive a copy post free, and every Ham should see that they receive one. We have in Victoria approximately 300 members and three affiliated clubs, but there are quite a number of holders of the A.O.P.C. who have not yet enrolled. In view of the fact that the officials of the Institute do an enormous amount of work voluntarily (not only in the interests of our members but also of the non-members), it is not in keeping with the **Ham spirit** to take a share of the advantages which the other fellows' fees and energy provide. Our ranks are open to anyone who is genuinely interested in the science of Wireless, irrespective of their knowledge of the subject, and a hearty welcome is assured to all members with a definite promise of assistance and help, in any desired direction within our scope.

The country experimenter will now be in closer touch with the city enthusiasts and will be kept informed of all Institute activities right up to the minute.

The Institute, in a general sense, is divided into four sections (with a possible fifth to be formed later). Of these, the chief is, of course, the **Executive**, known as the Council, which consists of the President, Secretary, Treasurer and ten full members elected annually, whose duty it is to shape the destiny of the Division, control its funds and do all such acts and deeds which are esential for the successful functioning of the whole, within the limits of the constitution.

The Short Wave Group, which is the latest section, is devoted to the Experimental side of short wave transmitting and receiving, and much good work is being done by this very enthusiastic body.

The "Key" Section, probably the largest numerically of all the sections, is a very active group whose work largely constitutes filling the atmosphere with "dits and dahs," burning much midnight Yallourn energy, and in general communication with the uttermost ends of the earth, with as low power as possible. It is largely from this group that the Royal Australian Air Force Wireless Reserve was recruited, and so successful has been the experiment, that it has now been officially accepted as an indispensable unit of our country's Defence Forces. The "Key" Section is largely responsible, in conjunction with other Amateurs the world over, for the successful pioneering of the many frequencies or wavelengths which were at one time considered impossible, but which are now in general use.

The Telephone Section, which is undoubtedly the best known to the general body of listeners, is also very live, energetic and enthusiastic. Their work generally needs no amplification —the very high standard of their transmissions, excellent arrangement of programmes from a purely listener's viewpoint and the high entertainment value of their labours, are a real asset not only to the W.I.A., but to the Government and the Radio Trade generally. There are 22 Country and 24 Metropolitan Amateur Stations actively engaged in entertaining listeners during non-broadcast hours on week nights and Sundays. In many cases in the country, they provide the only programmes that can be received decently owing to atmospheric conditions, particularly during daylight.

Mention should be made of the **Technical Development Section**, a small committee of highly trained technicians who control the Instrument Library of the Institute, and who are always ready and willing to offer the benefit of their greater knowledge to their less advanced fellow members.

The possible fifth section to be known as the Super Het Club, depends largely upon the public response to the suggestion and, if formed, will be open to everyone. Interesting competitions with valuable prizes for the logging of distant stations, advice on constructing efficient receivers, short wave converters, interesting lectures, a portion of this magazine devoted entirely to their interests, participation in our social life, and a host of other interesting and entertaining features will be arranged, the cost being practically reduced to subscription to this publication.

There is several hundred pounds worth of highly efficient gear, such as broadcast and short wave transmitters and receivers, meters of all kinds and technical publications at the disposal of our members and it is the earnest desire of the Council that the fullest possible use be made of them.

This first editorial would not be complete without reference to the wonderful assistance and courteous consideration that we have received from the Department of the Chief Inspector of Wireless at all times. To Mr. J. Malone and his staff, Messrs. Martin, Dobbin, Conry, Greig and Dunne, do we express our cordial greetings and thanks.

We have every confidence that, in this journal, our many transmitting and receiving radio friends will find news of interest of other people's doings and at the same time have a forum in which to place their own ideas pertaining to Amateur Radio.

THE EDITOR'S CQ.

Our President has introduced us in no uncertain manner. Concise, without any "padding," he has laid bare the workings of the W.I.A. To him we offer our sincere thanks: to our members, for their approval, we offer "Amateur Radio."

With this first issue, it is most necessary to mention our various advertising friends. These people are the very life blood of "Amateur Radio," inasmuch as their dues in no small way contribute to allaying our printing costs. You can believe us when we tell you that selling advertising space is no easy matter.

We appeal to you to support our advertisers, and when you buy any parts to make that new set, we want you to mention that you saw their ad. in "Amateur Radio," thus making Goodwill for the magazine with the surety of renewal of contracts. **We cannot stress this point too strongly.**

So this is "Amateur Radio!" If you don't like it, tell us; if you do, tell your friends.—THE EDITORS.

"Read, Mark, Learn—"

There's a brotherhood of radio
Right throughout our land to-day
All experimenting, testing
Banded by the W.I.A.

Live in shacks and such like places
Wotting not of things around
Caring not for mundane matters
Long as D X may be found.

Nought to them if markets vary
While their tubes and "batts" are sound,
Though the exchange rate's a problem
When subscription date comes round.

When they meet in solemn conclave,
Things of moment are discussed;
Questions of the day propounded;
How the foreign cards are rushed!

Since that VK3's suggestion
That they start a magazine
Was considered and adopted
Great discussions there have been.

Send along your contributions,
All can help to make it go,
Pull your weight, and get behind it—
Here's to "Amateur Radio."

(Mrs.) L. E. HUTCHINGS,
(VK3HM).

SIMPLE CRYSTAL CONTROL

By MAX HOWDEN (VK3BQ)

There are two main reasons given as objections to the use of C.C. and one of these really includes two others. The first is that several stages must be used and this makes the cost too high and makes the outfit too bulky. The second is that it is supposed to be impossible to change the frequency when QRM is bad.

We will dispose of the latter argument in a few words by stating that a piece of mica, approximately the same shape as the crystal and about seven mills thick, placed with the crystal in the holder, will increase the frequency enough to clear the signals from any reasonable QRM. To go back to the first item and its two riders—some experiments were carried out at 3BQ a few weeks ago and the eighty metre transmitter that will be described now is the result.

The advantages of the penthode as a CO. have been dealt with at some length in QST and other journals, but none of these seem to have made any mention of the higher power that can be used without any risk of damage to the crystals.

The first tube that was tested was an E443N with 60 volts battery bias, 150 volts on the space charge grid and gradually increased plate voltage. At 400 the input power was eight watts with the aerial taking the load and a good deal of local work has been carried out with this arrangement. The actual crystal current was so small that it could hardly be measured and as any good crystal will stand up to some 100 ma. of R.F. in its actual circuit (that is, as measured by the thermo couple milliameter at M) it was thought safe to increase the voltage up to 600. With this the input increased to 24 watts with a hardly perceptable increase in the crystal current. The E443N showed no signs of strain so 1000 volts were tried. At that the crystal current was about 25 ma showing that the crystal would be safe with anything up to 16 times the power. The input with 1000 volts on the plate was 55 watts and with the aerial taking the load the valve did not heat but when a 247 was tried in its place it flashed over at the pinch at the first touch of the key.

At 600 volts the 247 behaved in a similar manner to the 443.

Eventually it was decided to see what effect 1400 volts would have on the valve. Nothing drastic happened although that aerial ammeter needle hit the far end and the valve thought it had been mistaken for a neon sign. The input was 90 watts and the valve still functions normally but what was most satisfactory was that the crystal current was only 42 ma. which showed that with a suitable valve or valves in parallel to handle the power, the crystal would not object to a couple of hundred watts anyway.

It would seem that a couple of F443's or QC 5/15's in parallel would go nicely but they have not been tried as yet.

The next step was the introducing of automatic bias which worked very well and gave the valve a fair chance with the higher voltages. Several PM24B's were tested at 1000 volts and except for slightly lower input they functioned the same as the 443 except that they did not glow noticably.

The inductances were rather too large to tune down to the forty metre band so half of each was shorted out when the 7 m.c. harmonic crystal was tried. The efficiency seemed to be just the same as on eighty metres so with eight turns of heavy wire of small tubing in each coil shunted by a .0005 condenser both bands can easily be covered, by simply switching in the other coil and retuning with the condensers. For twenty metre work, those who have twenty metre crystals are welcome to test them to any power they like, and others who have not a crystal of this frequency are recommended to replace the crystal holder by a .002 mfd. condenser and to insert a small diameter coil of about 25 turns of fine wire at M and so turn the outfit into a TNT rig. If after testing, etc., no results have been obtained, it is then advisable to short out the automatic bias and everything should be OK. This is the reason for the 25,000 ohm. grid leak in place of the more usual grid choke across the crystal. The other R.F. chokes consist of some four inches of ¼in. tubing close wound with 32 DSC wire. One of these chokes can be used across the crystal for those who prefer to utilise some other type of set for twenty metre work.

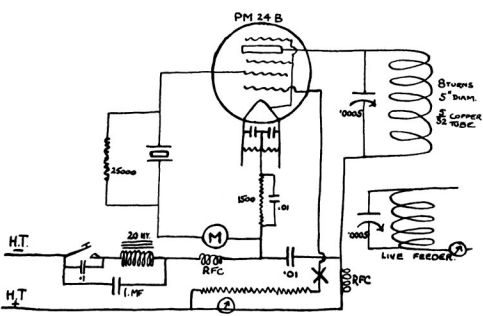
The keying in the HT neg. lead is quite satisfactory and very clean with good active crystals but one or two have been tried that would not respond fast enough and for them it was necessary to key the space charge grid by inserting the key and filter at X. A very nice noise is created when the key is used in this position with 1000 volts on an active crystal, but it is difficult to copy on account of the strong backwave caused by the tube still oscillating feebly. At 400-600 volts this back wave is hardly noticeable and the keying excellent. For these relatively low powers all the key filter need consist of is a small inductance such as the secondary of an audio transformer and a half mike condenser across both key and choke together with a .1 mfd. condenser across the key itself. For higher powers about double values should be used with anything up to 30 henries in the choke and a 400 ohm. resister in series with the small condenser if the arcing at the key is bad. The voltage divider used to break the space charge grid voltage down to a reasonable value is not at all critical but it seems to be advisable to use a high value in this position rather than a normal resistance and higher bias on the control grid. The reason for this is that the space charge grid is not capable of handling much power and is likely to be melted if too much pressure is applied to it.

Using it in conjunction with a straight SG detector and penthode all AC receiver, stations up to within 100 KC of the crystal in use, can be heard with the key down and of course with the key up there is no blanketing at all. Several good break-in QSO's have been held with interstate stations with no trouble at all while local work can be carried on indefinitely.

One word of warning to those who think that anything is near enough. It will be noticed that the aerial coil is coupled to the filament end of the tank coil and that the live end is the furthest from the tank and this should be followed. With other methods keying will be sluggish and very wide spacing will be necessary before the crystal will oscillate at all.

Nothing has been said so far concerning push-pull because it was not intended to make this transmitter any more complicated than necessary and little if anything could be gained except by those who are lucky enough to possess a couple of QC 2/75's or something even bigger in the way of screen grid valves. These should work well in push pull with even half a kilo-watt input without damage to the crystal provided that the aerial is coupled and tuned before the full power is applied. Several years ago two 210's were tried in push-pull at 3BQ with 40 watts input on the 40 metre band. Many Yanks were worked and the crystal, a forty metre fundamental slab, is still intact.

Heissing modulation has been tested on the present outfit and is quite satisfactory provided that the crystal is not worked too near the cut-off point.



Key Section Notes.

NOTICE:—The next meeting of the Key Section will be held on Tuesday, 3rd October at 8 p.m.

As this is by far the most important of our notes, in this issue we give it pride of place. At the last meeting an increase of nearly 50 per cent in attendance, including 7 new members, speaks eloquently for the interest with which the boys look forward to meeting nights.

Nearly every newly licenced ham makes his debut as a pounder of brass and we should be fully aware that his first and most lasting impressions are gained in our ranks.

Let us strive to make them very pleasant ones, for who of us can look back to the time when he started without realising that a little encouragement and patience will earn the gratitude of the newcomer and convince him that the ham spirit is really existent. However, let me give a word of warning concerning illegal operating. By all means help a man who is keen to get his "ticket," but don't condone his installing and operating a transmitter until he has an A.O.P.C. The authorities are getting more strict on this breach of regulations and detection not only prejudices his chances, but also renders you liable to proceedings.

DX conditions on 'forty' are now looking up and some of the boys have done excellent work recently on this band. Unfortunately DX has its bad points. Have you ever searched the band from end to end in the hope that you will find someone with whom you can have a yarn—in vain? Has it ever struck you that DX is not now the wonder that it was a few years ago? And do you ever realise that indulgence in DX to the exclusion of the other branches of the grand old radio game is the surest way to kill the ham spirit.

Let us but realise that DX is not an achievement in these days, that our licences were granted primarily to encourage experimental work, that if we are to EXIST in the not so distant future, it is only by fostering the brotherhood of amateurs by banding together in a strong organisation and putting the very best we can into it that we can hope to keep the privileges that we now enjoy. Believe me, we have a lot to do to justify our existence. Let us pull together with the Wireless Institute as our protecting organisation and we CAN do it.

With all that off our chest, let us now consider something which will nterest us all. The Federal Executive is staging a five point relay contest in October. This will be the first of a series of six contests, the winner of each of which will receive a handsome trophy.

It rests with the gang to show them that not only the winner but also second, third and fourth at least live in VK3.

In addition to the trophies already mentioned, there is a trophy for the State which obtains the highest aggregate score over the six contests and is known as the "Fisk Shield." Now here is a chance to show your team spirit, gang. Every entry means another man in the team, and every man means more points to VK3. We want that trophy and we have just got to get it. The details and rules of the contest will be found elsewhere in this issue. Read them up now and put your station in order for the big fight.

It is a surprising fact that portables have not found very much favour in this country, but with summer and the holiday season fast approaching, a fine opportunity for progressive hams to do a bit of thinking along these lines is presented. What is wanted is a portable which is primarily cheap, efficient, really portable, and lastly, reliable. Don't forget, however, that permission to operate a portable station must first be obtained from the P.M.G.'s Department.

This page is for your use; it is up to all members of the Key Section to give all the suggestions and helpful criticism you can; and to help you do this VK3XR and VK3PS will be on the air, calling "CQ MAG," on schedules given below to take any 'dope' you care to shoot along.

VK3PS—7050 KC, Wednesday and Thursday, 1930 MMT.

VK3PS—3525 KC, alternate Sundays, 11.30 MMT.

VK3XR—7280 KC, Monday and Friday, 1930 MMT.; Sunday, 1230 MMT.

Finally we would like to welcome the following new members to the ranks of the Key Section: VK3HQ, VK3OP, VK3PQ, VK3ZQ, VK3QJ, VK3FJ, VK3FG and VK3KC.

J. H. WINTON, VK3XR.

Phone Section Notes

At the meeting of the above Section held on Tuesday, September 12, office-bearers were selected for the coming year. Chairman: Mr. R. M. Dalton (3UI). Secretary: Mr. I. Morgan (3DH). Assistant Secretary: Mr. W. Fitzpatrick (3WF).

In addition to these we have the allocation Committee as follows:—Mr. Manning, Mr. J. Kurley, Mr. Lahiff, and Mr. L. Richards. This number is one more than with which we have previously worked, but it was unanimously decided that since these gentlemen are fairly well spread out geographically, everyone should have a better chance of getting a fair observation.

Now first and foremost the subject of publicity for the Institute. This matter was dealt with to a certain extent at our last meeting, and has, as a matter of fact, been discussed at meetings for some time. We cannot stress too heavily the importance of letting everyone, not only active amateurs or interested experimenters, know that they can achieve little or nothing unless they are members of this body. Anyone who has just a slight interest in radio reception should join the W.I.A. The benefits which would be theirs are worth as much as their gear or knowledge, be it large or small.

The Phone Stations can do more than their share to make these people realise they should be members. By virtue of the fact that the 'phone section members are in direct contact with the Broadcast Listeners, the "Superhet Club," (details of which will be found in our President's Editorial) must be made known to everyone in Melbourne, at least, who listens to Amateur transmissions either by design or accident.

This brings us to an important point. Repeating what was said at the meeting, our channels, given us for use on Sundays MUST be utilised 100 per cent.—they are one of our most valuable assets, and we cannot afford to lose them, which may possibly be the case if they are not given full use.

If you cannot go on the air yourself, always remember to communicate with the other chap with whom you share your frequency allocation.

With regard to the doings of the "Phone Hams" the writer attempted to collect information, but most of them appear to be rebuilding or installing larger or more tubes to get out further (?) with the same power, but no very technical information was forthcoming.

VK3CB particularly, seems to be building a large frame for a new transmitter, which will be, he says, water cooled (the frame only) also the house has been repainted and the radiation (?) has increased by 100 per cent. When 3CB was asked by the allocation Committee if he wanted a wave length, since there was no application in, he said "Yes,—same wave length, same time," and 3BY was heard to remark—"and same rotten transmissions." By the way, can you find the new call sign attached to a certain gentleman's name on our Index page?

There are probably quite a number of chaps working on "Phone" who have been, or are, specialising in some particular branch of "Phone Work" such as, tubes for speech amplifier work, microphones, pickups, and methods of coupling microphones, tubes and pickups. Also modulation systems, and a score of other branches. Now why can't we have an article from at least one member of our gang in every issue of "Amateur Radio." There are enough items to last for years, and since every man has probably a different opinion on each subject, we should have an unlimited supply.

There seems to have been an increase in the amount of "duplex ragchewing" going on, in the last couple of months. The period of the winter months, when one prefers to remain at home, may have something to do with it; at any rate the value of this work is quite high.

Getting back to the subject of publicity once more; in this direction we could perhaps commence this part of the performance earlier in the evening; then about 12 p.m. on Sundays, and by suitable arrangements, have a "National Hookup," as it were, and all stations could broadcast the same programme simultaneously, consisting of some W.I.A. propaganda. Apart from the possible subject of the material broadcast, the mere fact of its being a novelty would make the public sit up and take more

notice. Ths scheme was brought up by Mr. G. F. Thompson at a "Phone Meeting" some months ago, and since nothing has been done regarding the matter there is an obvious necessity for more co-operation. There are no real difficulties attached to the stunt from a technical point of view.

Most of us are able to work duplex with a few stations and all that is necessary is a receiver capable of picking up another station and rebroadcasting it on one's own frequency.

There also is a simple and interesting means of making the "Phone Section" Notes contain some real ideas worth swopping. The writer will be "on the air" each Sunday at about 12 p.m. (after 3BY has closed down) to receive information for publication in "Amateur Radio." It is much easier to yarn about your ideas than make up an article, so let's have one or both.

A chat on the above notes at our next meeting on Tuesday, 10th October, would be appreciated.

Country members of this section please note that their permits are now due for renewal, and they are advised to communicate with the Department immediately. New Frequency allocations for the country are in the hands of Mr. G. Thompson, c/o W.I.A., to whom you are advised to write.

IVOR MORGAN (VK3DH).

VICTORIAN RAILWAYS INSTITUTE (Wireless Club)

Since the Victorian Railways Institute Wireless Club's first provisional Committee of nine met in June, 1926, steady progress in activity has been registered, there now being approximately 300 members on the books. During this period, owing to the depression, rationing and dismissals in the Railway Department a loss of membership was felt, but at the end of this financial year the Club is comparatively as sound as at its inception.

From a modest beginning the experimental station, VK3RI has in a matter of a little over seven years assumed quite respectable proportions and now ranks with the foremost amateur stations as is testified by the hundreds of appreciative letters on file in the Club Room, many of these from so far afield as New Guinea, New Zealand and Western Australia. Nearly 5000 applications have been received from listeners for Q.S.L. Cards in the last six years.

Not so long ago, broadcast experiments were being conducted by our enthusiasts, using very crude apparatus, the power for which was derived from a few "B" batteries, but the indifferent results obtained in no way damped their ardour. Since that time, however, gear to the value of nearly £500 is now in regular use at the Club, including some very fine laboratory apparatus.

At the last Annual Meeting held on 24th August, the following office-bearers were elected for ensuing year:

President: Mr. T. Ramsay.
Vice-Presidents: Mr. A. Galbraith, Mr. G. Massey.
Council: Mr. W. Smart, Mr. E. Greer, Mr. J. McBain, Mr. E. Milligan, Mr. N. Hienrichsen, Mr. W. Harrison, Mr. K. McCarthy (3FX), Mr. H. Byrne (3HB),
Secretary: Mr. W. E. Brennan (3RO)
Treasurer: Mr. W. I. May.
Assist. Secretary: Mr. C. H. Harris.

A Smoke Social followed the Annual Meeting and the guests of honor were Messrs. G. Thompson, "Goke" Dalton and G. Douglas of the W.I.A. VK3RO proposed the toast of the W.I.A. and George Thompson responded in a manner suitable to the occasion.

"HARMONICS"

During the summer, 3UK and 3ML are going away, one week-end each month and will be carrying out some special tests. Three transmitters will be taken, one for 80 mx, one for 40 mx and 20 mx and one for 10 mx and 5 mx. Full details of dates and schedules will be in next issue.

"HARMONICS"

When at school in 1912, VK3BY used to work out the answers to his home lessons with his school pals via the air with a spark transmitter.

We think what we heard the other night was a couple of young chaps talking trig. in a new continent for W.A.C. called Algebra!

ROYAL AUSTRALIAN AIR FORCE WIRELESS RESERVE

VICTORIAN NOTES

It is a very happy feeling to pick up pencil and paper, to write the Reserve notes for the inaugural issue of "AMATEUR RADIO," because we know our magazine is going to fill a long felt want in the W.I.A. It will serve to draw closer together the various sectionalised activities of the Institute and provide a medium, through which each of us will know just what the other man is doing.

Briefly, the Royal Australian Air Force Wireless Reserve was designed to utilize the services and equipment of licensed amateurs in the following directions:—

(a) To facilitate communication between Air Force stations and detached aircraft.
(b) To co-operate in the observation of tests of Air Force W/T equipment.
(c) To foster interest in the Air Force and aviation in general, with particular regard to communication as an auxiliary to ground organisation.
(d) To provide the basis of an emergency communication system to be used in the event of permanent communications breaking down.
(e) To facilitate the collection of weather reports.
(f) To train amateurs generally in the correct RAAF W/T procedure for the expeditious handling of traffic.

The Reserve in Victoria is divided into sections of six stations each, including a Section Commander. Each station holds office as Section Commander for a two monthly period, thus every man has control of his section for eight weeks each year.

Trophies are given annually for the best section, the best Section Commander and the best traffic handler in Victoria, and these are presented at the Reserve Convention which is held in Melbourne each September.

Our second Annual Convention has just finished and we have had one of the happiest, busiest and most tiring weeks of our lives! On Monday, September 4th the balloon—sorry—the plane went up, and, as a curtain-raiser for the big week, we had a dinner followed by a theatre night. Tuesday saw the serious work commence when the country members were medically examined and duly enlisted in the re-organised Reserve. Under the new organisation, our section of the W.I.A. becomes the Wireless Section of the RAAF Reserve, thus all members must enlist in the Reserve in the normal manner. On Tuesday evening our first meeting was held at 3Z1 (3UK). After the District Commander had opened the Convention and touched on the main points of interest during the past year, Wing Commander Wrigley presented the Trophy to this year's crack traffic handler 3D4 (3OR), and a cup to last year's winner 3A5 (3OW). Flight-Lieutenant Wiggins gave a very interesting talk on the Reserve and its future, and after a great deal of discussion (but no yarns, hi!) the evening broke up, everyone looking forward with the keenest anticipation to the Wednesday and Thursday, for they were the BIG days of the week. Wednesday dawned fine but windy and after meeting at the Barracks, the whole gang left for two days, in Plane to ground W/T training at Laverton and Pt. Cook. The whole story of the two great days is told by Doug 3C5 (3YK) below.

Wednesday night was "half time" so all had an early night, except a few indefatiguables who "did the shows"! Thursday and Friday nights were devoted to discussions on procedure, arranging new contests and, in general, forming our domestic policy for the coming year.

Then on Saturday night the country members were the guests of the W.I.A. at one of the biggest, brightest and best dinners and smoke nights we have ever had. They say all good things must come to an end—perhaps it makes us appreciate them all the more while they last—but it was with a feeling of genuine regret that we left 3D6's (3YL's) on Sunday night for we realised it was writing 'Finis' on the Convention for yet another year. We all had a great night there, thanks to our charming hostesses, and it seemed a fitting end to a great week. Monday saw the departure of most of the country boys and on Monday night the old familiar signals appeared again on 3.5MC.

With old friendships renewed and new ones formed, with the ties that bind us all into one unit, stronger than ever, this coming year bids fair to far surpass any of its predecessors. If we can feel at the end, that we have accomplished something for our country, through our Hobby, we will be more than satisfied.

THE ROYAL AUSTRALIAN AIR FORCE WIRELESS RESERVE

THE RESERVE TAKES AN "AIRING"

By 3C5 (3YK)

Each year, at our Annual Reserve Convention, a period of training in plane to ground radio work will be carried out at Laverton. This year the BIG days were Wednesday and Thursday, 13th and 14th September.

Wednesday was rather blowy, but fine and all were in great spirits, when they met at 0930 in front of the RAAF HQ. Transport was arranged by Tender and a hilarious trip down was made. As the Tender was shod with solid rubber tyres, a little QSX by some of the gang was excusable! On arrival at Laverton, the boys were divided into two sections; Nr. I, which consisted of those who had been medically examined and duly enlisted on the previous day, and Nr. 2, who still had to undergo the test.

The first item on the program was an inspection, by both sections, of Nr. I. Aircraft Depot. Those of the gang who had a leaning towards engineering, were especially interested in the overhauling of the aero engines, which of course, is a very frequent and important event for each machine.

The interest intensified on arrival at the parachute room and, as Nr. I. section was to fly in the afternoon, the more imaginative must have had visions of joining the Caterpillar Club!

This inspection over, the journey was continued to Pt. Cook for lunch in the Airmen's Mess, where some surprising quantities of food were put away, by those who had no qualms of what the afternoon would bring forth (or up!), through airsickness. After lunch, the sections divided, Nr. 2 repairing to the Ward Room for Medical examination and enlistment. Nr. I. section was split up into three subsections; A. went to the pier-head and the W/T equipped Southampton, in which the days flying was to be carried out. B, went to the receiving station and C to the transmitting rooms.

The ground transmitters are remotely controlled from the receiving rooms, so, while sub-section C examined the transmitting equipment, B held two-way communication with A. After about three-quarters of an hour's flying, the Southampton alighted, and the sub-sections changed around. Later, a third change was effected, thus, each had a period of working the ground from the air, the air from the ground, and also examining the origin of the "hefty wollop" known as VJP.

Meanwhile section 2 had been put through its paces in the ward room and had also had a very instructive and entertaining! lecture, on Procedure in traffic handling. Both sections re-united at about 1700 hours, and, after several false starts, when various members were reported missing, the gang left for VIM.

Next morning, a baby gale was blowing and a few of Nr. 2 section, whose turn it was for flying, wished they had been allotted to Nr. 1 and had had their plane training on the previous day! One member failed to turn up and in the end the Tender had to leave with him. Whilst passing through the city, however, a frantic CQ was heard and the missing one was sighted, doubling "hell for leather" through the traffic. Apparently he wasn't used to being punctual; after all, what is an hour or two in the country? hi hi. After a desperate chase, he was eventually hauled on board, nearly dead to the world!

On arrival at Pt. Cook, a demonstration of message picking up from the ground, was given by a Wapiti. This was followed by light signalling between plane and ground.

After lunch, section 2 was divided into sub-sections, as Nr. 1 had been on the previous day. As the weather was bad, a Wapiti was used instead of the Southampton. This, of course, necessitated the members going up singly, instead of in subsections as on the Wednesday. All the gang realised, that operating from the observer's cockpit of a Wapiti is not conducive to good keying, especially in the boisterous weather experienced. The writer lost a pair of goggles from about 2000 feet and was well stung by the driving rain, which was falling rather heavily whilst he was having his flip. Nevertheless, a report and some traffic was exchanged with the ground station quite OK.

Each sub-section, when inspecting the transmitting rooms, found its ideas, on various well-known components, somewhat upset by the gigantic proportions, of some of them. The tank coil of one of the long wave transmitters, could have conveniently served as a cage for a couple of tigers and, some of the stand-off in-

sulators, might have done duty for gate-posts.

1700 hours found us regretfully realising that the two great days were over. We piled into the Tender for the return journey, tired, but all sparking well and whiled away the trip back, by some very bright reminiscences (note 'reminiscences' is not spelt Y-A-R-N-S!!). They had been two very enjoyable days and our thanks are due to all at Laverton and Pt. Cook for their efforts on our behalf.

There are still a few vacancies in the sections, for both town and country stations. Here is a real opportunity for doing something of tangible usefulness with your hobby. Even apart from the Patriotic standpoint, enlistment in the Reserve carries with it many advantages from the Amateur point of view. All Hams interested write immediately to District Commander, RAAF W.R. 3rd. District, 5 Fordholm Road, Hawthorn, E.2.

SCOTCH COLLEGE NOTES

When the Club decided to apply for a transmitting licence, it was found necessary to put the Constitution on a proper formal basis, and so a new one was drawn up, submitted to, and accepted by, the members and endorsed by Dr. Littlejohn.

The first job is to qualify for the AOPC and, with the examination only three weeks off, the task of reaching the required standard in the time, is formidable. Regular code practice and lectures have begun and, in spite of the magnitude of the job, we are hopeful that one or more of us may qualify, to relieve Mr. Marshall of the responsibility of our transmissions.

The transmitter VK3SC is a TPTG, using a 247, with about 5 watts input and the antenna a half wave 7 mc Zepp. Our President, who owned and operated 5DO ten years ago, is most hopeful of renewing old friendships, and will be delighted to hear from any Hams who worked with him in the years 1923-4-5.

CAN YOU FIND A RADIO TERM TO SUIT THIS PICTURE?

During the "RAAFWR" Convention, it was suggested by many of the gang that we should run an "Obstinate Artist" Competition. While we do not wish to pat ourselves on the back, we must say that our artist was "engaged" some weeks previously. Just goes to show how "we are on our toes."

The results of our "Artist's" labors are shown opposite, and rules for the Contest hereunder.

Each suggested title for the picture is to be accompanied by 1d. stamp, and the title is to be of a Radio nature.

We are guaranteeing a prize of 20/-, and if entries are sufficient, the prize value will increase accordingly.

Each individual may send in as many entries as they wish, addressing the envelopes "Obstinate Artist," c/o W.I.A., Kelvin Hall, Collins Place, Melbourne. The Editor's decision is final.

A.R.R.L. INTERNATIONAL TEST, 1933

AUSTRALIAN SECTION SCORES AND PLACINGS

Received from A.R.R.L. via W2CL and VK3RJ, the scores shown below represent "Red Hot" news, not having been printed in any other radio journal.

Our congratulations to VK3ML and VK3RJ for filling the first two places in the Australian Section.

VK3ML	11,232	VK3KX	455
VK3RJ	3,696	VK3CX	386
VK2JZ	3,456	VK5WJ	394
VK5PK	3,440	VK4GK	258
VK4JU	3,023	VK2WD	210
VK5FM	2,820	VK3MX	162
VK3ES	2,390	VK3FM	156
VK3WL	2,205	VK2VG	135
VK2ZW	1,800	VK6SA	135
VK2OU	1,755	VK3XF	126
VK7CH	1,520	VK2FQ	120
VK7BC	1,278	VK2TR	72
VK5GR	1080	VK3DC	55
VK3BW	984	VK2YL	24
VK2PX	909	VK3AX	8
VK3HK	840	VK3YW	8
VK2ER	488	VK3LQ	3

It is understood the world's highest score was run up by EAR185.

Within U.S.A. and Canada the highest score was from W8ZD.

QSL BUREAU NOTES

QSL cards for the following Stations are on hand at the QSL Bureau, 23 Landale Street, Box Hill, Vic., and may be obtained on the receipt of a stamped addressed envelope:—

VK3AH	AN	BD	CL	CR	CW	
DL	EP	ET	FC	FM	GU	GX
JM	JN	JO	KQ	LM	LP	LY
MI	MJ	MM	MX	NC	NG	NM
OD	OX	OZ	PQ	QJ	RN	RQ
RS	RT	TD	TP	UJ	UY	WH
WK	WO	XX	YL	YR	ZK	
ZL	ZY.					

Messrs. Burnell, Coghlan, Graf, Henrickson, Kennedy, Mason, White.

MANNER OF DISTRIBUTION OF INWARD CARDS

Inward Cards are distributed by the following methods:—

Cards for country members are posted direct during the first week of each month.

Cards for suburban members are distributed at the monthly meeting of the key section.

Cards for all other Stations must be obtained by forwarding a stamped envelope to the Bureau. Stations sending for cards should forward only large envelopes to facilitate despatch and to obviate the necessity of folding cards.

To receive expeditious treatment, outward cards should reach the Bureau during the last week of any month and stamps or postal notes to cover the QSL charge of one halfpenny per card should be enclosed.

Correct postage should be placed on packets of cards sent to the Bureau as all surcharged articles are refused.

If any writing is enclosed in packets of cards, postage at letter rates should be affixed to the packet.

QRA's or any other information regarding stations in all parts of the world will be supplied on receipt of a stamped envelope.

R. E. JONES, VK3RJ,
QSL Manager.

ANTENNAE WIRE

Following a recent article in QST regarding the stretching of soft drawn copper aerial wire, we have made several tests and find that all that was said in that article was very true.

We have made arrangements with Messrs. Thomas Warburton Pty. Ltd. to stock No. 14 gauge hard drawn copper wire. Hitherto this has been unprocurable in Melbourne.

The above firm, who are advertising on our back cover page, also stock duco with which to protect the surface of the wire. This duco could also be applied to those loose coils in your short wave receiver!

CQ 28 AND 56 M.C.

VK3OF would like it known that at 11 on each Sunday he will be calling CQ on 5 and 10 metres, on 'phone and C.W.

EXPERIMENTAL ACTIVITIES OF THE SHORTWAVE GROUP.

The Shortwave Experimental Group of the W.I.A. (Vic. Division) was formed to co-ordinate the work of a number of isolated enthusiastic shortwave broadcast listeners experimentally inclined, and to suggest further lines for investigation.

At the outset it was not intended to open the group so as to include all shortwave listeners because it was thought that the experimental work might be retarded. Shortwave listeners who were likely to become interested, and who would, with the necessary training, be in a position to undertake experiments were encouraged, of course, and the amount of ground covered during the short eighteen months of its existence has fully justified the policy.

All lectures, demonstrations and other activities have been designed to foster and encourage the experifental side of the Group's existence and the papers and lectures which have been delivered have been chosen to assist in some such activity.

The Group would be pleased to have the enquiries and assistance of other members, and prospective members, who might be interested in the work, much of which is closely allied to that of medium wave broadcasting. An extract from the report submitted to the Annual Meeting of the Institute is published verbatim.

The work accomplished up to date is as follows:—

(1) Experimental observations to determine the maximum signal periods, for reception in Australia, of overseas shortwave stations operating on the alloted bands of 50 m., 31 m., 25 m., 19 m., 16 m., and 13 m. Twelve months observation have been completed for the 25 m. band for European stations and graphical results extended to indicate the duration and incidence of the maximum periods for each month of the year. The analysis of results together with a copy of the graphs obtained by coordinating individual reports, has been forwarded to the two stations most interested—Radio Paris and the Empire Station of the B.B.C. The report to the B.B.C. was a lengthy one of six pages of closely typed foolscap and included a completed questionnaire submitted for our reply. The work was most favorably received by the B.B.C. engineers.

Similar observations are nearing completion for the 31 m. and 50 m. bands.

(2) In August 1932, a detailed observation was undertaken during the eclipse of the sun and the results forwarded to the B.E.R.U. who requested it. This also was suitably acknowledged.

(3) An outline and study of the deficiencies from which our shortwave broadcast receivers suffer, and progressive improvement in the light of our experiences etc. This work is not completed because of the difficulties present but is progressing satisfactorily.

(4) A study and development of a suitable frequency meter which would cover the important broadcast bands on both short and medium waves. The meter which resulted—an electron coupled type—has proved to be more stable than we anticipated and the method of calibration easier to accomplish without elaborate equipment than was expected. Unfortunately greater accuracy is limited by difficulties in obtaining accurately graduated dials.

(5) Educational. Papers by world authorities in other countries have been made available for our use through the medium of the library and have been used extensively in providing "lectures" etc. at our ordinary meetings.

Visits of inspection were arranged at monthly periods to points of interest in technical laboratories and workshops in and around Melbourne and when the supply diminished, their place was taken by demonstrations, in the rooms, of equipment available in the instrument library.

Opportunity was taken to calibrate some of our individual instruments.

A similarly extensive programme has been mapped out for the ensuing period and we are at present engaged upon a useful survey of suitable tuning units for all wave receivers together with an attempt to determine whether the super het. method of reception can be mechanically simplified to enable home constructors to obtain the benefit of its undoubted advantages over the older or more common T.R.F. Receiver.

—W.G.S.

Institute's Annual Dinner

Excellent Evening with Prominent Guests

Saturday evening, September 9th, was the occasion of the annual dinner of the Victorian Division of the W.I.A., at which about sixty members were present, the official guests of the evening being the R.A.A.F.W.R. country members. Individual expressions of opinion on the success of the evening were most gratifying to those responsible for the organising of the whole show. Collective opinion was expressed very forcibly by the manner in which the various speeches were received, and by the lateness of the hour at which the party broke up.

Many prominent personages were present, including Mr. S. W. Gadsden (past Federal President of W.I.A.), Mr. J. Malone (Chief Inspector of Wireless for Australia) and Mr. J. Martin, of the R.I.'s office. Tasmania was represented by "Snowy" Harrison (VK7CH).

Responding to the toast of the visitors, Mr. Malone's speech was positively teeming with propoganda which the W.I.A. Council could well use to swell the membership list.

Eulogising the Australian Amateur Radio man, Mr. Malone asked whether the "Hams" were slipping back. His own personal opinions led him to believe that this was not so, but that there was plenty of room for more cohesion, a stronger spirit of co-operation, and that we should stick together and do something for ourselves.

The progress of the Ham movement had been one most meritorious, and it was the happy privilege of he and his department not to act as "low policeman" but to be "fatherly" rather than "heavy." When we Hams consult the department, we consult friends rather than unfriendly critics.

The W.I.A. is very important in controlling policy of amateurs, and for this reason the Ham has had a fair go in Australia, as an example, the liberal Radio Laws in this country compared with those in many others.

Mr. Malone congratulated the country members who had come to Melbourne at their own expense for no personal gain, except the interest of Ham Radio. He referred to the compliment paid to the Amateur movement and the W.I.A. and also personally congratulated Mr. S. W. Gadsden on his recent appointment to a certain Commonwealth Radio Inquiry.

Mentioning Sunday morning amateur programme, we were told to put these up to the public in a manner particularly fit for their digestion, and that we should use more publicity (only give us the chance O.M.'s E.D. "A.R."). It was gratifying to the W.I.A. to hear that the department liked to hear someone speaking for the Amateur Radio community and stressed once again the necessity for sticking together in an active organisation like the W.I.A.

Mr. Martin responded also, saying that we were fortunate in having Mr. Thompson for our President. Both Thompson and Dalton are termed by the depot "the official beg your pardon officers" for the W.I.A. It was up to the Hams to realise what was being done for them and that they should stick behind the executive for this reason.

Mr. Martin said there were a lot of hams who were not W.I.A. members (hear-hear from Mr. Malone) and it was in the interests of all to be members of that organisation.

Speeches were also made by members of the R.A.A.F.W.R., and various other entertaining gentlemen.

Space does not permit us giving the description of the evening we would like. Suffice to say "A GOOD TIME WAS HAD BY ALL!"

W.I.A. MEETING NIGHTS

1st Tuesday in each month—Key Section.
2nd Tuesday in each month—Phone Section.
2nd Wednesday in each month—Short Wave Group (Demonstration Night).
2nd Thursday in each month—Council Meeting.
3rd Tuesday in each month—Metropolitan Reserve Stations.
3rd Wednesday in each month—For General Meeting
4th Tuesday in each month—For Technical Development Section
4th Wednesday in each month—Short Wave Group (Business and Lecture Night).

AUSTRALIAN FIVE POINT RELAY CONTEST 1933

FISK SHIELD TROPHY

Below we print verbatim, the Rules of the 1933 Five Point Relay Contest promoted by W.I.A. Federal Headquarters at Adelaide.

Accompanying these rules was a letter asking us to give this Contest all the publicity possible.

We would suggest that VK3 strive to have the largest number of entrants showing that the best "Ham" publicity medium is "Amateur Radio."

Regarding Rule 7, it is an excellent opportunity to tell VK generally what you think of the first issue. If so, we may say that the Editorial staff will be listening to all the criticism with great interest.

Rules of the Contest.

(1) A maximum number of messages than can be originated by one station is THIRTY (30). They should be numbered from 1 to 30.

(2) Each message must have not less than twenty words in the TEXT.

(3) Messages can be originated by any station in any State. They must be relayed through no less than four States. By this we mean, and we want to make this point very clear, indeed, FOUR States plus the originators own State make up the FIVE.

When the preamble bears the call of Five Stations, it is finished with.

(4) Allocation of points: ONE point will be given for each message sent and ONE point for each message received. That is, if a station relays a message it is worth points, one for receiving and ONE for retransmitting. Upon a message reaching the fifth State and becoming dead. it will give an extra half point, to the receiving station only. Make 1½ points to the station receiving a message that would be dead on his receiving it.

(5) All messages, whether they have completed the chain or not at the end of the contest must be forwarded by the station handling the messages to the W.I.A. by the 20th November, 1933. No entries will be received after that date, and one must remember that if one fails to send in returns ALL stations who have handled those messages will lose points.

(6) There is no rule against stations making schedules in advance.

(7) Messages must not be of the rubber stamp type. Try and make them interesting to all.

(8) Traffic managers must not include their traffic totals in this contest.

(9) A special log must be submitted by all participating stations at the conclusion of the contest, showing the number of messages handled. The logs must be forwarded together with a copy of all messages handled to the W.I.A. at the conclusion of the contest.

(10) THE DATES of the contest will be from 0001 SMT on October 21st to 2359 SMT on October 29th, 1933. Logs must be in hand at the W.I.A. by the 20th November, 1933. Address your entries:—

WIRELESS INSTITUTE OF AUSTRALIA.
Box 284D G.P.O.
Adelaide, Sth. Australia.
Mark the envelope Federal Contest Manager.

Identification Discs

The investment of one penny at one of the metal embossing machines installed at all city Railway Stations and at the Post Office will give a ham the basis of a neat lapel badge call sign.

In making his own, the writer cut away the superfluous aluminium, forming an oval just large enough to leave a small margin around the letters. The whole was then given a couple of coats of blue duco. When dry the colour was carefully scraped off the raised letters, and a coat of clear duco applied as a finish.

An ordinary large pin. bent over at the head, is pushed through for attaching to the lapel and was inserted before ducoing, so that its head is the same colour as the ground of the badge. Another application of the above idea would be for name plates for instruments, dials, etc.—VK3PS.

(EDITOR'S NOTE: The above idea has been explained to several of the W.I.A. Executive, and has met with wholehearted approval. It must be understood, however, that the badge described above must not take the place of the regular W.I.A. insignia. Our regular badge should be worn at all times. It is a means of identification when interviewing our various advertising friends, and when making all radio purchases).—ED. "A.R."

UNOFFICIAL HISTORY OF THE R.A.A.F. RESERVE CONVENTION

By 3C3 (3RH)

Well our Convention has come and gone and the thought uppermost in my mind is, "Thanks be to Allah, the next is only eleven and a half months away." I feel sure all you fellows who shared in the enjoyable programme will echo that sentiment—and then some.

For a "first offence" the show was certainly a splendid effort and primarily, the 'blame' can be laid at the respective doors of our worthy Federal and District Commanders, Flying Officer Cunningham and Pilot Officer Marshall. Don't forget this fact, chaps, and in future show your appreciation by always drinking "Kiwi" and sprucing up your shoes with "Glen Valley"—its different. (Adv. 4d. a line!!)

Looking back in retrospect upon those hectic seven days, many different topics intrude themselves and, strangely enough, the serious side of our work appears merely as a background to our experiences in the lighter vein. Perhaps this is as it should be, for who wishes the Reserve to take it's pleasures sadly? While not unmindful of the great compliment paid and the confidence placed in us by the Air Board, by actually enlisting us in the RAAF Reserve, I feel sure that we lost nothing in efficiency by "looking on the bright side" of things.

Fortunately, most of the country members were able to get down to Melbourne for the occasion and this gave us the opportunity to look each other over and either laugh or cry at the imaginary conceptions we had conceived, during our previous etheristic contacts!!! I won't dwell on that particular point, however, as I may drift into deep water—and it's too darn cool for swimming these days.

I wonder whether you are all aware that 3HG did the rounds of the city, looking for the best brand of canary-seed? He's after 3OR's lildicky bird next year and when he gets it home, he is going to keep it so well-fed and contented, it will never want to leave again. And, while on the subject of 3HG, let's drag in his companion in QRM—3OW. Don't those two look as if butter wouldn't melt in their mouths? I guess, if the occasion demanded it however, they could both generate saliva sufficiently potent to dissolve diamonds!!

I believe 3OR and 3KR became much annoyed when the manager of the Regent refused their request, to run through portion of "The Kid from Spain" again slowly, so that they could check up on Eddie Cantor's technique in the episode of the ignition key!! Personally, I'm sure that those boys, without further tuition, could obtain similar results, even if by a more circuitous route hi!

Then you'll all remember the face of the Mess Corp. at Pt. Cook, when 3DW tried to prove the fallacy of the old adage "Man cannot live on bread alone"—and asked for a fourth loaf! And the tea!—guess 3UK slipped on the contract this year, but here's hoping they'll keep the business in the family in future hi.

It was hard luck that 3HL finished up the week with a bad cold. The doc was unable to diagnose whether the cause was due to a bad attack of "breeze up," which naturally chilled the liver, or to 'HL sitting in a bit of a draught while doing his stuff in the Wapiti.

And now it appears that I have picked on a lot of the boys from the bush and have given myself the miss. That's hardly fair, so I'll tell you what the young lady—no I won't! Second thoughts are best. But I'll keep it until next Convention and in the meantime, gang, don't forget the Reserve secret sign—left hand waving a la propeller, right hand extended as though grasping the fuse-'age and keying with the right foot hi. So cheerio boys, but before dismissing, let's up on our hind legs and let off our war cry—a cry that may yet become the envy and terror of our enemies—if any. Now then altogether—H.L.Z!!!!!

BERU NOTES FOR SEPT. 1933

LONDON, SEPT. 18th, RADIO BY G6CL.
Distributed by Radio via Empire Link Stations to all Empire Societies.

The eighth Convention of the RSGB was attended by nearly 200 members from every part of the British Isles. The opening meeting took the form of a conversazione, when short papers on subjects of Amateur interest were given, whilst films taken by G2PD

and G6UN were also shown. A running buffet enabled everyone to become quickly acquainted. SUIEC, VS6AH and VQ5NTB, were amongst our visitors. The various meetings and the dinner are fully reported in the September T. and R. Bulletin, which also contains details of practical five metre apparatus.

Activity continues on 56 mc and some interesting contacts have been made up to distances of about fifty miles. The 28 mc band has shown an improvement and numerous QSO's with Europe, North Africa and Egypt have been effected.

Keenness is being shown in Television problems especially in connection with ultra short wave work. A Contact Bureau Group has been formed and overseas members interested in this problem are cordially invited to co-operate.

HAMADS

Offers made in advertisements below are made "subject to sales."

This column is open to W.I.A. members at a charge of 2d. (two pence) per line.

To non-members of W.I.A. or affliated bodies the charge is 4d. (four pence) per line or part thereof.

The Editor reserves the right of refusal of any advertisement.

WANTED—Burnt out "Ferranti" Audio Transformers.

FOR SALE—One (1) only push-pull, input-output "Ferranti" Transformer for coupling two push-pull stages.—VK3XR, c/o W.I.A., or 'Phone: U-2662.

WANTED—One National drum dial, with escutcheon. Cheap. VK3OC, c/o W.I.A.

FOR SALE—U8 Full wave rectifiers, 500 volt rating. Will definitely replace UX281's, 4/6 each.—VK3LQ, c/o W.I.A.

If you want a lapel call sign, as described in this issue, write, see, or call VK3PS. Price 6d. finished. Postage 2d.

FOR SALE—Transformers 230v., 325 watt, 1260v. C.T., new 35/-; 10v 8a 8/6; 1250v. 150ma. Kenotron. 15/-; Transmitters. 28 MC. T.N.T with 171a, 10/-; 7MC Hartley with E408, 17/6; o-25MA meter, valves, condensers etc. Any offers?—VK3JJ. M-1984.

NORTH SUBURBAN RADIO CLUB

If you are interested in Radio—you should join the North Suburban Radio Club which caters for both the beginner and advanced experimenter. The Club meets every alternate Monday evening at 8 p.m. in their club rooms, 354 Rathdown Street, North Carlton. The next meeting will be held on Monday, 2nd October and a lecture of interest has been arranged.

A party of members recently spent frequency measurements and receiving station of the P.M.G.'s Department, and the Department are to be commended on the high standard of efficiency of their apparatus. On October 8th, a party of members are to visit the "shack" of Wm. Sievers, 3CB, and he has made arrangements for some of his "flames" to greet us. (From what I hear, Bill is a thorough gentleman).

The Club is operating a fone xmitter (VK3FY) on the 200 metre band, and is in operation on Sundays on 195 metres (1538 KC) from 8.30 an enjoyable afternoon at the Radio to 10 a.m. and on 222.1 metres (1350 KC) from 10.30 p.m. till the op. falls asleep.

3FY has challenged the Melbourne Experimental Radio Club to a QSO competition—that is—the greatest number of confirmed QSO's in a month, points to be awarded for distance, and it is to be hoped that they will accept our challenge.

As this goes to press, we are using a P.P. TNT on 40 and 80 metres, with telefunken modulation.

All enquiries regarding Club activities will be welcomed by our Secretary—Wm. Wonder, 12 Smith Street, Thornbury. N.17.

HARMONICS

We have on good authority that VK3WI is going on the air in the near future, and from what we know, the whole family will be listening to he Programmes.

Ken Rankin (VK3KR) passed his examination in December, 1926.

Somebody has asked whether it was medical!

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